



# Community Liaison Committee Meeting #38

September 2021

# Agenda

1. Review of June 8<sup>th</sup>, 2021 meeting notes
2. Membership Items
3. Algoma Steel Merger
4. Air Emissions Modeling and Monitoring
5. Site Specific Standards / Technical Standards
6. Environmental Compliance Approval updates
7. Legacy Environmental Action Plan
8. Public Complaints
9. Next Meetings

# Membership Items

## Current Members and Alternates

### Representation

Algoma Steel  
Ministry of Environment, Conservation & Parks  
Public  
Public  
SSM Tribe of Chippewa Indians  
Algoma Public Health  
Chippewa County Health Dept.  
Batchewana First Nations  
City of Sault Ste. Marie  
United Steel Workers Local 2251  
St. Mary's River RAP Coordinator

### Primary Member

Fred Post  
Lori Greco  
David Trowbridge  
Jillian Marquis  
Kathie Brosemer  
Melissa Francella  
Steve Carey  
Dan Sayers Jr.  
Catherine Taddo  
Wayne Hubbard  
Lisa Derickx

### Alternate

Chris Galizia  
Ron Dorscht  
Peter McLarty  
  
Chris Spooney  
Suzanne Lieurance  
  
Maggie McAuley  
Dennis Gagne

# Algoma Steel's Return to Public Markets

*May 24, 2021 – Algoma Steel and Legato Merger Corp. Sign Definitive Merger Agreement*

- The merger is an important step in Algoma Steel's transformation into a more sustainable company, demonstrating we are increasingly stable and investment worthy.
- Our return to public markets will position Algoma Steel on a path for growth and profitability.
- Legato Merger Corp is a publicly-listed special purpose acquisition company (SPAC) (Nasdaq:LEGO)
- The transaction brings capital into the company for strategic investments, including the potential for a substantial investment in electric arc steelmaking which would enhance earnings potential and substantially reduce Algoma's greenhouse gas emissions by approximately 70%.
- Upon closing, the merged entity will be a Canadian company, Algoma Steel Group Inc., listed both in Canada (TSX) and in the US (Nasdaq).



# EAF Would Significantly Shrink Algoma's Environmental Footprint

- Electric arc steelmaking (EAF) generates substantially less CO2 and other air pollutants compared to Blast Furnace production

3.0MM metric tonnes anticipated reduction (~70%) of carbon GHG emissions<sup>(1)</sup> representing:

✓ **11% of the Canadian Federal industrial 2030 Paris Agreement target**

✓ **100% of the provincial industrial 2030 target**

		Preliminary Estimated Reduction <sup>(1)</sup>	% Reduction
GHG Emissions	CO2	3.0MM tonnes	70%
	CO2/NT production	1.33 tonnes	75%
SOx emissions		4,060 tonnes	82%
NOx emissions		1,604 tonnes	52%
Cokemaking Emissions		Complete elimination of Cokemaking Stack and Fugitive Emissions	100%

Source: Company information. Note: All years refer to calendar year unless otherwise specified. Expected environmental benefits from the EAF are based on projected estimates for Algoma, using published data sources for similar technologies.

(1) Based on current production versus forecasted production of 3.0MM tons of steel shipments produced under full EAF configuration.

# Air Emissions Modeling

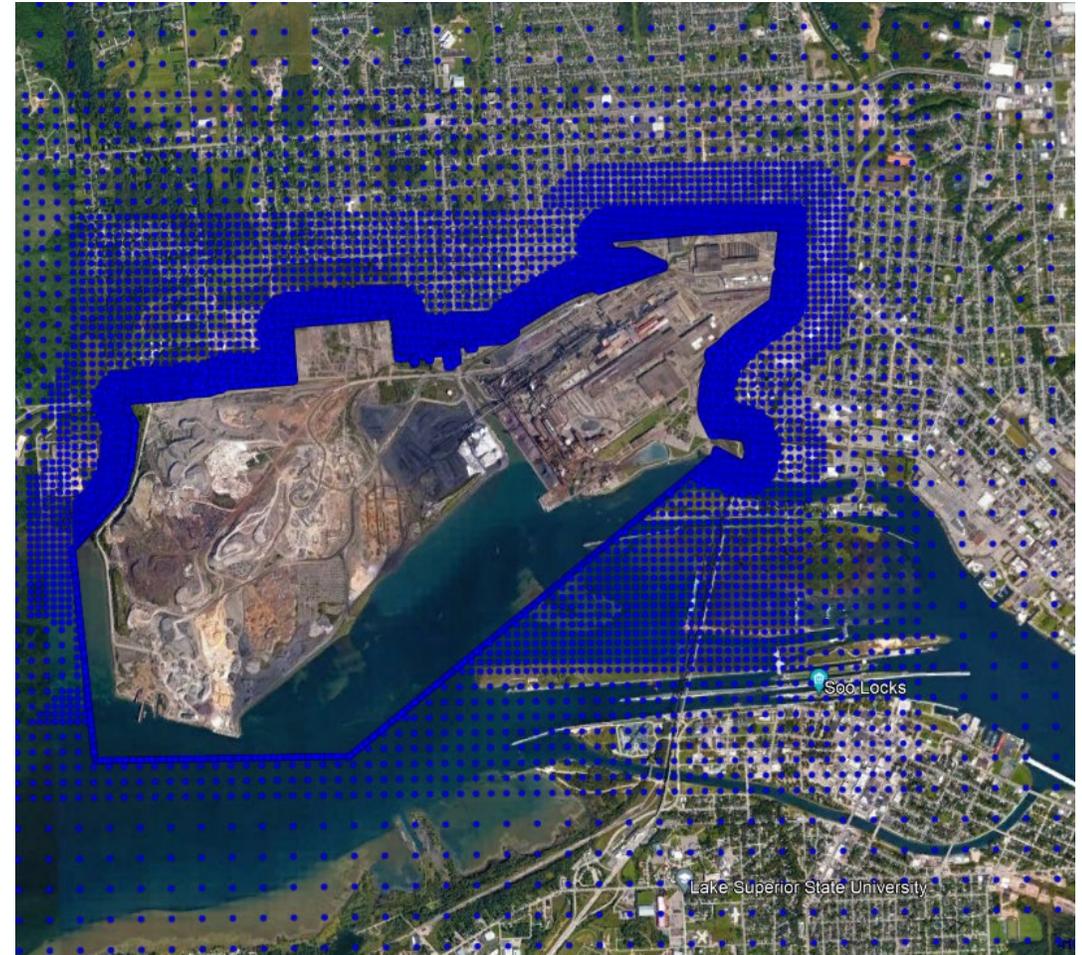
## *Data inputs include:*

- Five years of hourly meteorological data: wind speeds, wind directions, temperature, barometric pressure, precipitation
- Property boundaries, onsite physical structure coordinates, elevations and local terrain data
- Emission source data for onsite sources including:
  - Point sources such as baghouses, scrubbers, combustion stacks, cooling towers, etc.;
  - Fugitive sources including:
    - Line sources such as coke batteries, roadways and buildings;
    - Volume sources such as storage tanks, conveyor systems and iron beaching; and
    - Area sources such as stockpiles, slag pits and slag processing.
- Emissions source data includes GPS coordinates, physical layout, stack heights, stack diameters, exit velocities, temperatures, and emission factors from guidelines or source testing for up to 92 contaminants
- Facility production capacities including inputs (fuels, raw materials, etc.) and outputs (products, byproducts, etc.)
- Paved and unpaved roads, traffic flows, traffic speed, vehicle weight, travel distance, onsite road dust analysis

# Air Emissions Modeling

## Modeling Process

- Using all of the data inputs simultaneously, the model calculates predicted dispersions for each point on a receptor grid surrounding the facility beginning at 1 meter intervals at the property boundary and expanding outwards at 2, 4 and 8 meter intervals.
- Point of impingement concentrations for each contaminant are calculated for 1 hour, 24 hour, quarterly and annual time periods for each point of reception which can then be compared to the respective standards in the regulation.
- The model outputs are based on maximum production capacities from all facilities operating simultaneously.
- Analysis of modeled and site specific monitored data shows Algoma Steel's model is conservative



# Air Emissions Modeling and Monitoring

## *Requested discussion topics*

- Emissions Summary and Dispersion Modelling Report (ESDM)
- Process upsets and incidents - Analysis of modeled and site specific monitored data shows Algoma Steel's model is conservative
- Monitoring station locations
  - The Ministry of Environment, Conservation and Parks (MECP) is undertaking a review of potential monitoring station locations considering:
    - Algoma's ESDM
    - MECP siting criteria
    - Available land space within proximity to facility and maximum modeled concentrations

# Site Specific Standards for Particulate and BaP

On March 27<sup>th</sup>, 2015 Algoma received a Site Specific Standard (SSS) for Particulate which sets specific emission limits in cokemaking. Expiry of the SSS has since been extended to June 2023 to allow enough time for a technical standard to be developed and for Ontario cokemaking facilities to register. The rules and leak limits remain the same, but have been incorporated into a Cokemaking Environmental Compliance Approval which requires:

- Certified observers (per EPA Method 9 and Method 303)
- 5 days per week, 10 Saturdays and 10 Sundays each year
- Must observe daily per battery: 4 pushes, 5 charges, all lids, all doors, and all standpipes
- Must make operational adjustments if over the daily limits and notify MECP

# Cokemaking Emissions Performance – 100% compliance

Identifies Key Performance Indicators related to Cokemaking Emissions:

- average intensity of pushing emissions
- average duration of charging emissions
- % lid leaks
- % off-takes leaks
- % door leaks

*Conformance calculated daily for each battery*

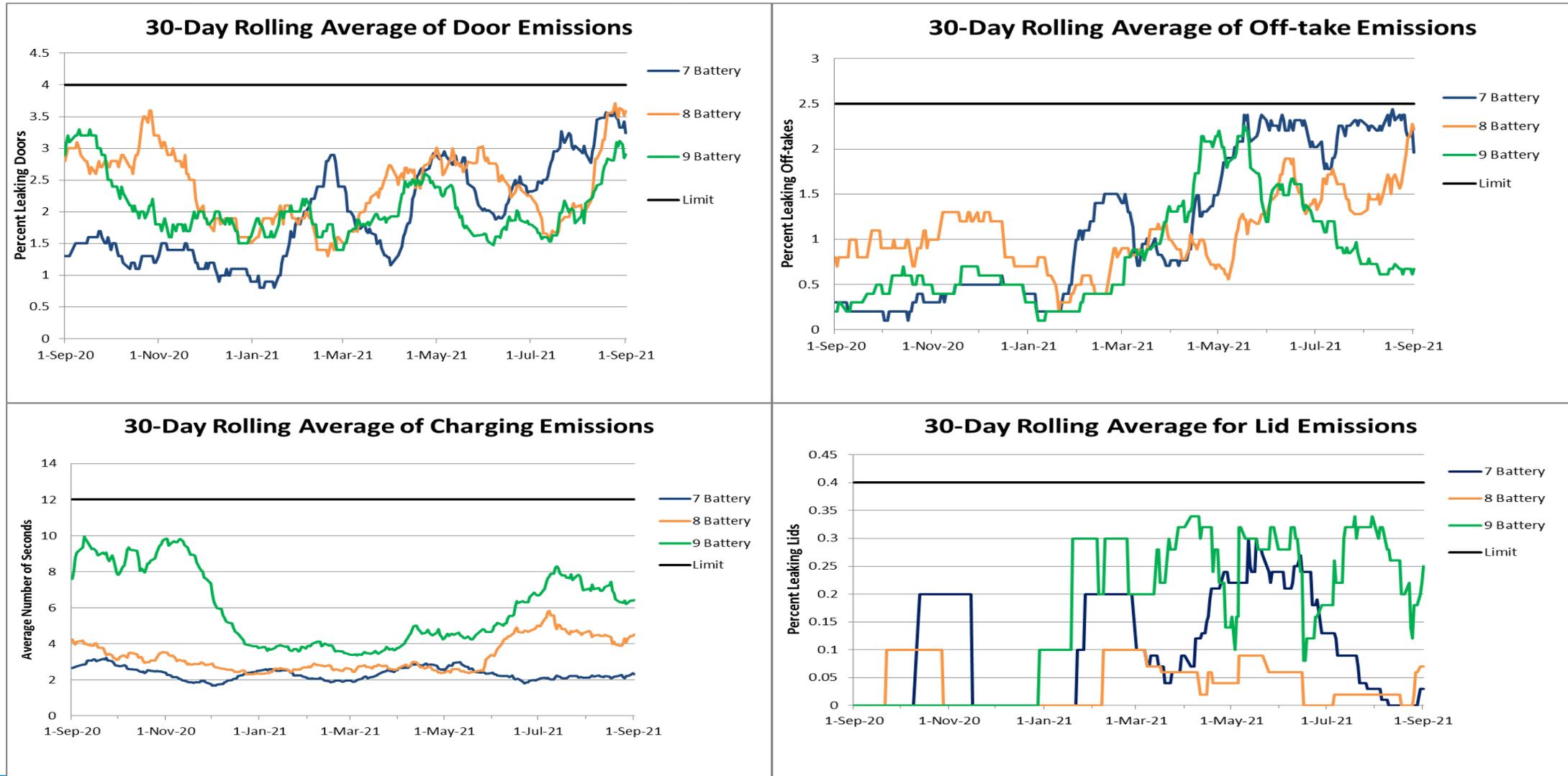
**New limits introduced July 2015. Progressive, annual reduction.**

Implementation Date	30 day rolling average %			Charging Emission	Pushing Opacity (%)
	Doors	Lids	Off-takes		
July 2, 2015	38	0.8	25	12 sec	50
Jan 1, 2016	22.5	0.8	15	12 sec	50
Jan 1, 2017	7	0.8	4.2	12 sec	50
Jan 1, 2019	7	0.8	4.2	12 sec	40
Jan 1, 2020	4	0.4	2.5	12 sec	30



**Algoma Steel is meeting the current limits on all three batteries.**

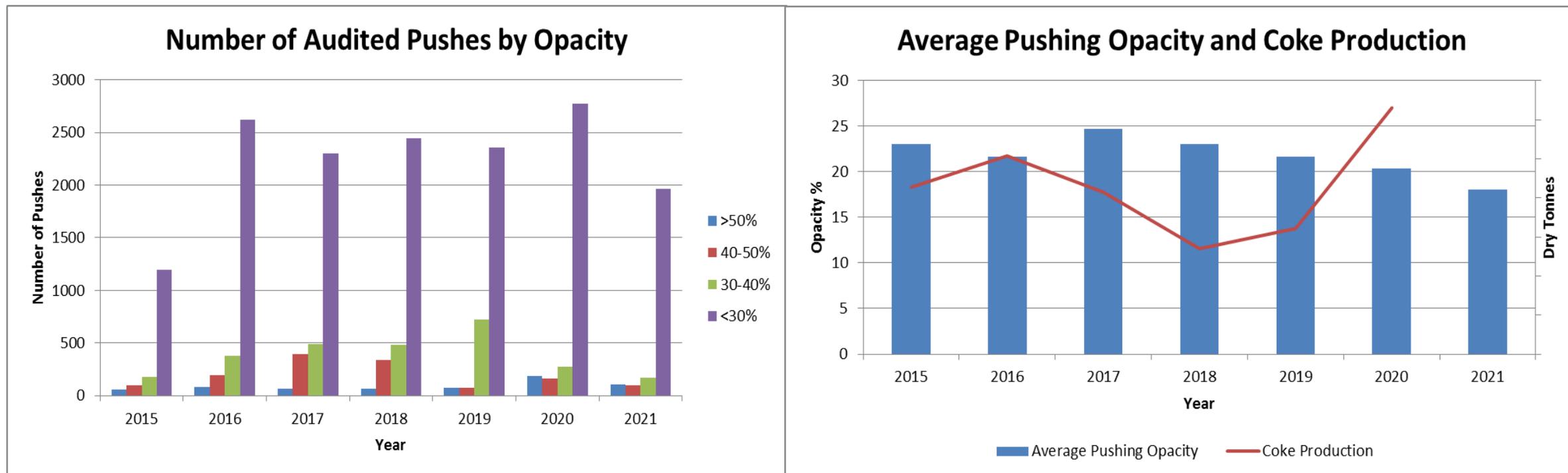
# Site Specific Air Quality Standard - Particulate & B(a)P



Algoma is operating below the limit for all parameters.

# Site Specific Air Quality Standard - Particulate & B(a)P

## Pushing Opacity



### Notes:

- 2015 data begins on July 2<sup>nd</sup> when the SSS came into force
- 2021 data includes Jan 1, 2021 to date
- Number of audits per year vary based on changing operating conditions



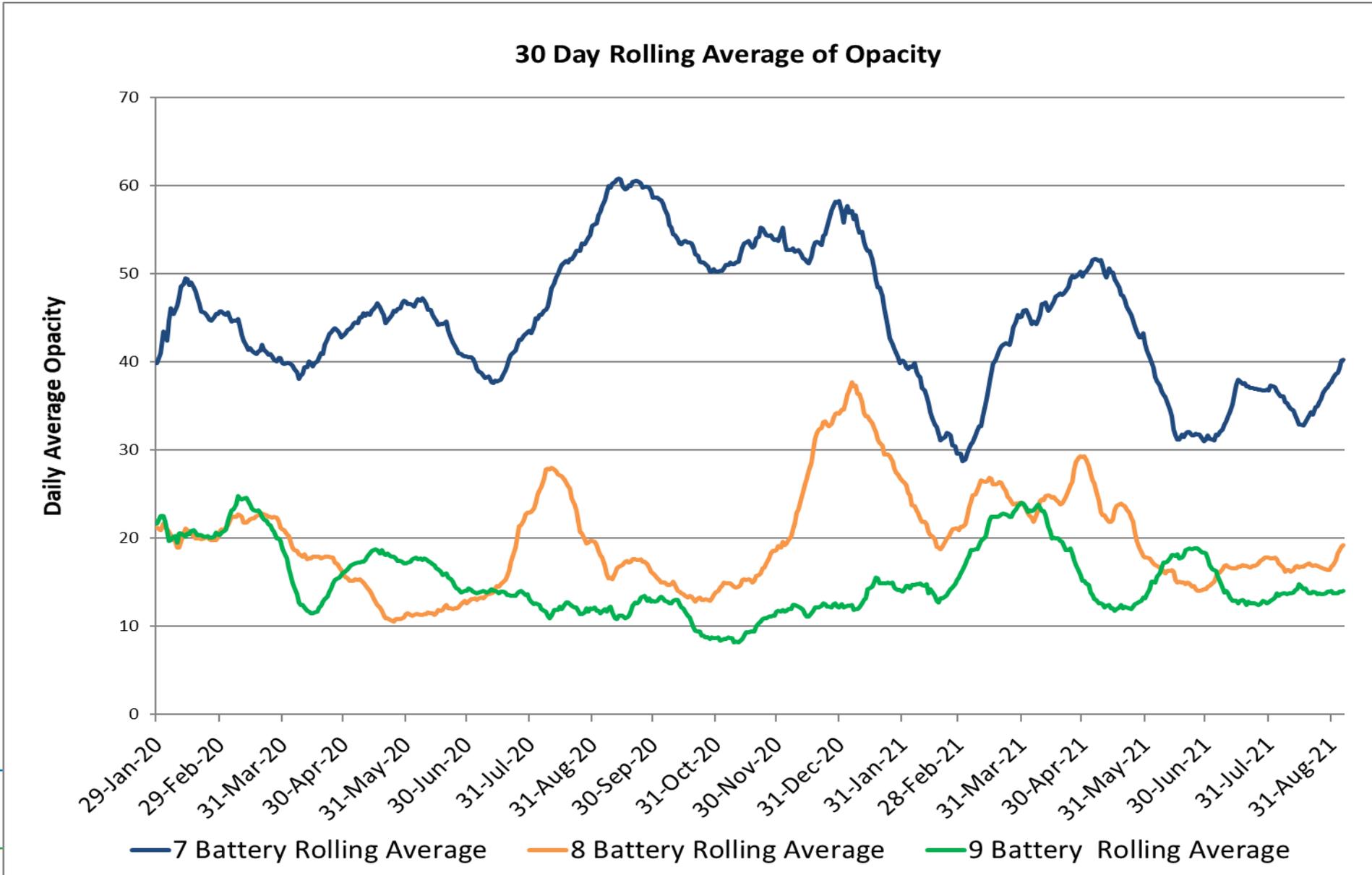
To date all corrective actions have been successful at reducing pushing opacity below the limit.

# Cokemaking Stack Opacity

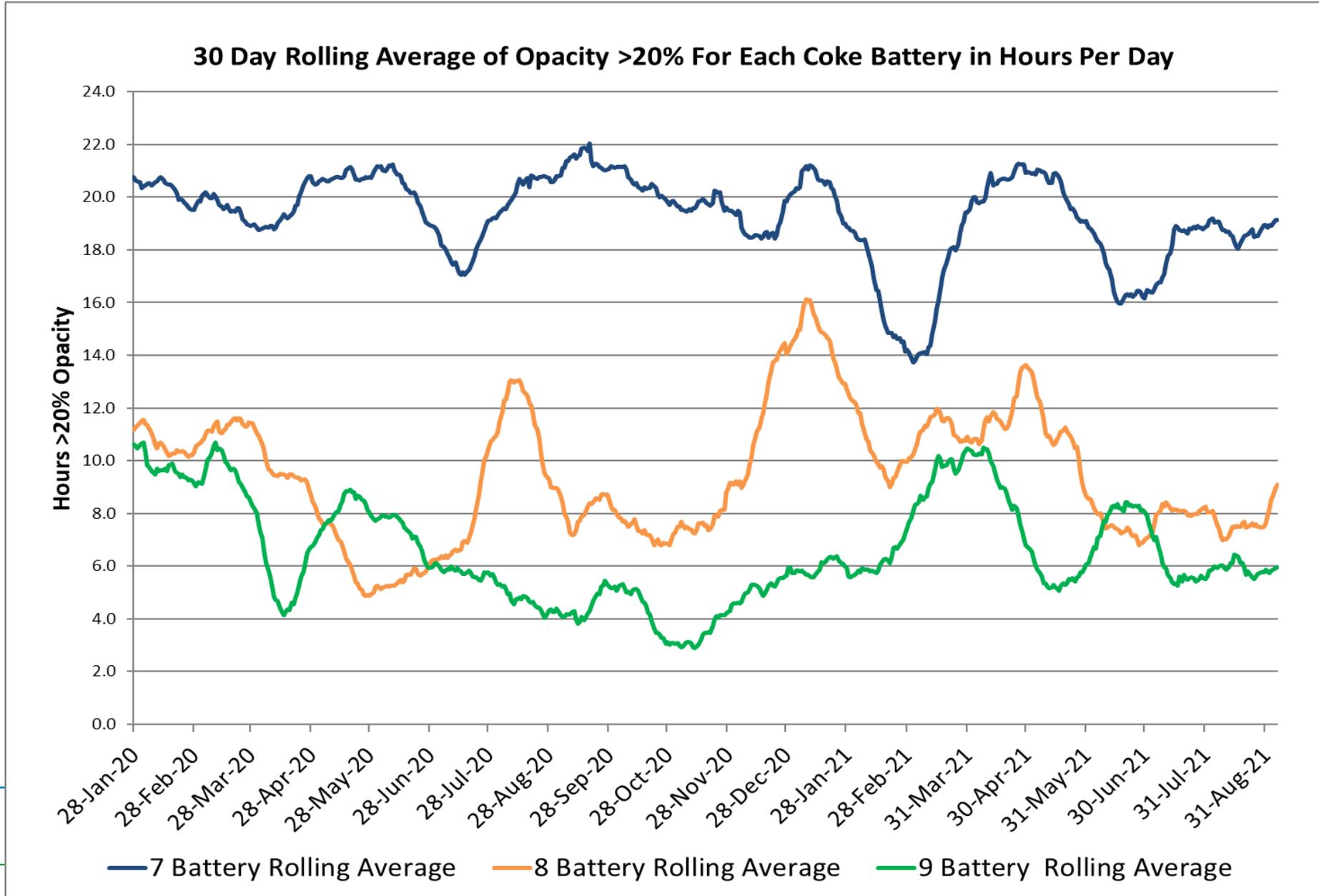
We have adopted a two-pronged approach to improving stack opacity. Efforts to date are showing positive results:

1. Replacing aging infrastructure and thoroughly inspecting and repairing oven masonry conditions. This minimizes gas leakage from the ovens to the flues and reduces stack opacity.
2. Implementing a thorough and methodical gas system inspection and correction program. This ensures clean gas is supplied, unrestricted to the batteries, allowing optimal combustion control and improving overall battery heating and stack opacity.

# Cokemaking Stack Opacity Performance – Average Opacity



# Cokemaking Stack Opacity Performance – Average Opacity Duration >20%



# Technical Standard

## Regulatory Instrument to replace existing SSS's

- A new integrated steelmaking industry Technical Standard for multiple air contaminants is under development
- Contaminants include: Suspended Particulate Matter, B(a)P, Benzene, Sulfur Dioxide, Total Reduced Sulfur and Manganese
- The MECP hosted a meeting April 25<sup>th</sup> to review the draft rationale document and has scheduled a series of follow up meetings to discuss concerns raised at the April meeting.

## Algoma Steel participating in MECP led working groups focusing on:

- Fugitive metal/particulate emissions from on-site roadways; steel-making; slag management;
- Identifying current emission sources and air pollution controls to ensure no back-sliding;
- Expanding Leak Detection And Repair (LDAR) programs in by-product plants for benzene;
- Coke oven gas de-sulphurization (Federally required by January 1, 2026);
- Development of an Ontario-based cokemaking emission auditor training and certification program;
- Completing a jurisdictional review of best available emission control techniques globally;
- Industry economic overview and economic feasibility assessment (industry led);
- Development of trigger mechanisms to facilitate a review of the appropriateness of the Technical Standard every 7-8 years

# Environmental Compliance Approvals

There are currently no applications for new environmental compliance approvals.

The MECP has amended the Benzene Emissions Control Environmental Compliance Approval to include new leak detection and repair requirements which will be implemented this calendar year.

# LEAP - Addressing Legacy Environmental Issues

## Legacy Environmental Action Plan (LEAP)

- The LEAP is a risk-based environmental management plan with the objectives of identifying, assessing, managing and mitigating off-site adverse environmental effects caused by Legacy Environmental Contamination at the Site.
- Targeted annual investment - \$3.8 million; totaling \$79.8 million over 21 years

### **\$4.4 million in projects have are planned for 2021 including the following :**

- Refurbish #7 Tank for future Groundwater Collection System **(Underway)**
- Design Base Line Road Ditch Water Treatment Facility **(Underway)**
- Carbon capture and storage testing **(Underway)**
- Extrusion briquetting testing **(Underway)**
- Boat Slip Sediment Study to develop a rehabilitation target for sediment quality criteria **(Underway)**
- Expanding the site wide baseline hydrogeological investigation **(Underway)**
- Design Oil Water Separator and Groundwater Collection System **(Underway)**
- Design Dirt / Oil / Water Separator for Vacuum Truck Dumping **(Underway)**
- Designing groundwater collection and treatment systems **(Underway)**
- Tank Bottom Clean-out (#1 & #5 Tanks) **(Underway)**
- Surface stabilization, ground and surface water management and revegetation **(Underway)**



# Public Complaints

The following public complaints were received by the Company since the last CLC:

- 2 Odour – Unknown source
- 2 Particulate – Visible emissions from cokemaking

An internal investigation into each public complaint is conducted and a report is submitted to the MECP and a summary is listed on the company website.

# Next Meetings

- Proposed 2021 Schedule:
  - Dec 14<sup>th</sup>, 2021
  - Mar 8<sup>th</sup>, 2022